Federal Communication Commission
Washington D.C. 20554

RE: WC Docket No. 07-38 – Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership

Comments by:

Rep. Tom Sloan
45th District State Representative
State Capitol
Topeka, KS 66612
sloan@house.state.ks.us

Summary: The geographic basis for aggregating broadband service data should correspond to existing well-recognized data collection units used by the Census Bureau, *i.e.*, blocks, block groups and tracts. Use of one or all of those geographic units for data aggregation will facilitate analysis of broadband data using other well recognized and documented demographic and economic characteristics to produce a richer picture of broadband deployment and the communities within which broadband services are available than is possible today with data aggregated by 5-digit zip codes.

Since one of the important reasons for gathering this information is to ensure that competition exists, the information must be gathered and disseminated to decision makers as fast as possible. The Commission should make better use of technology such as electronic publication of data to ensure near-real-time publication. I would also note that gathering and reporting of technology-specific data at more granular levels of geography would enable realistic identification of the extent to which actual competition exists.

Since the take rate is an indicator of effective deployment of broadband – *i.e.*, service provided within an area is not effective deployment if some barrier such as price or quality of service stands in the way of service to the end user – the ability to conduct granular analysis of actual purchase of broadband services is important.

As a state policy-maker attempting to develop incentives that will induce broadband providers (particularly the larger DSL and cable companies) to use multiple technologies to reach beyond city limits, FCC data providing greater specificity about which potential customers are adversely impacted by the digital divide and left without a viable option for service would be invaluable.

An unasked question is whether broadband service should constitute part of the universal service requirement of regulated telecommunications companies. Within a competitive marketplace, such services are being offered today in urban areas, but without viable competition, rural residents are too often unable to acquire broadband services.

Responses to specific questions posed in the Notice of Proposed Rulemaking follow:

27. *We seek comment on ways to better utilize Zip Code data currently submitted by Form 477 filers. Would requiring filers to submit customer counts along with Zip Code lists facilitate better analysis of broadband availability/deployment in specific Zip Codes?*

Yes. The current data are of minimal value in identifying the true availability of broadband service because zip code areas are so large and because of the minimal deployment required to trigger reporting by Form 477 filers. If the Commission pursues this avenue, reporting of "raw" numbers will not be as beneficial to state policy-makers as such customer numbers within the context of total persons living within the Zip Code. Please note my response to the next question as it reflects a data reporting that would be immeasurably more valuable to state and federal decision-makers.

We are skeptical that analysis of customer totals submitted at the 5-digit level of aggregation could significantly increase our understanding of the dynamics of broadband availability and deployment, i.e., because any methodology based on a 5-digit Zip Code aggregation will continue to yield results that do not accurately depict broadband availability in particular, localized areas within a Zip Code.

I agree. Data collection at the current zip-code aggregation level is nearly useless from a policy analysis perspective. This is particularly true when one is concerned with availability of broadband service to residential customers. I suggest that the geographic basis for aggregating data submitted by broadband service providers should correspond to existing, well-recognized data collection units used by the Census Bureau, *i.e.*, blocks, block groups, and tracts. That would facilitate analysis of broadband data with other demographic and economic data to produce a much more complete picture of broadband deployment and the communities within which broadband is available than is possible today with data based on five-digit zip-code areas. I recognize that the approach I suggest would require geocoding service addresses in some instances where address information is nonuniform or incomplete. However, the improved analysis would pay off in better policy to support and facilitate ubiquitous broadband deployment.

Alternatively, the Commission might at least narrow the geography for which its data is aggregated by requiring reporting entities to submit data for 9-digit zip codes. See my comments below on your question 56.

I also would note that data allowing identification of areas in which broadband competition exists, must be aggregated on a geographic basis below the zip-code level. That is because while satellite broadband might arguably be a competitive service anywhere in the country, it really isn't a solution to the competition question in many locations because of technical coverage problems. Locations at which satellite service is not an effective option may checkerboard an area as large and diverse as a five-digit zip code area.

29. We ask generally whether there are other ways in which we could make better use of the broadband data we currently collect on Form 477. For example, the semiannual report based on the Form 477 data include tables showing how broadband Internet subscribership varies among 5-digit geographical Zip Codes based on population density and household incomes. We are able to develop these tables because a commercial vendor has translated Census Bureau data (which is not collected byZip Code) into Zip Code-level data for those particular variables (i.e., population density and income). We invite commenters to identify, with specificity, comparable commercial products that translate, to the Zip Code-level, Census Bureau information about household education, race (including tribal lands), or disability status, so that we might include in our semiannual report tables showing how broadband Internet subscribership varies among Zip Codes based on these demographic variables.

I would note that while the Census Bureau does not collect data by Zip-Code, as you correctly observe, it reports decennial census results by Zip Code tabulation areas (ZCTA). Those areas are generalized representations of US Postal Service Zip Codes. A variety of both 100 percent census data and sample data from the 2000 Census are currently available for most five-digit ZCTAs in the US. Thus, it should be possible to conduct analysis of currently collected broadband data using Census data. I would also note, however, that the criteria used to collect the Form 477 data currently, *i.e.*, that only one subscriber in a given Zip Code is sufficient to trigger reporting of service in that area, makes such analysis largely meaningless. See my previous suggestion that data be collected at a more granular geographic level.

40. We seek comment on whether we should collect key demographic information (e.g., income, education, race (including tribal status), and disability status) about households located in those parts of the representative areas in which cable modem or DSL infrastructures have been deployed, to illustrate the relationship between these factors and broadband adoption. Which demographic variables should we measure? Does conducting meaningful analysis require demographic information about individual households? If it does, could the cable system and/or DSL service provider in the representative area provide that information? Alternatively, could we effectively use publicly available Census Bureau detailed demographic information (which would not identify individual households)? In general, are there public sources of detailed

demographic information for representative areas? Commenters who are aware of such sources should identify them with specificity and explain why they are appropriate to use.

While requiring service providers to collect demographic data in areas where broadband services are deployed would assist with analysis, the cost might well overwhelm the effort. However, if sample data collected by the Commission could be coordinated with the American Community Survey (ACS)[1] conducted by the Census Bureau data collection, the Commission would have rolling averages of demographic and household data that would make meaningful analysis of broadband deployment data possible. This approach would mitigate problems that arise as one attempts to use decennial Census data throughout the decade. For sparsely populated areas that are of most concern to advocates of ubiquitous broadband deployment, five year estimates of population characteristics will be available beginning in 2010. If the Commission began promptly aligning its data collection schedule and geographic focus with the ACS, a rich database could be developed that would be useful for policy analysis well into the future.

Notwithstanding the above comments about cost and regulatory burdens that might ensue by requiring providers or regulatory staff to determine demographic data within areas with broadband deployment, the Commission and state decision-makers would benefit from similar analysis of demographic data for non-serviced areas. For example, surrounding many communities with broadband service are residential areas comprised of professionals and business leaders who prefer a more rural lifestyle. Such persons' counterparts within the urban area subscribe to broadband services and it is logical to

---

[1] In 2005 the American Community Survey expanded to a monthly sample of about 250,000 addresses throughout the U.S. and Puerto Rico.

Every county in the U.S. and *municipio* in Puerto Rico is included as well as all American Indian reservations, Alaska Native villages, and Hawaiian Home Lands. In 2005 the annual sample of 3,000,000 addresses covered the population living in housing units. The group quarters population also was included beginning in January 2006. Single-year period estimates were available for communities of 65,000 or more beginning with the 2005 ACS, released in 2006. Every year thereafter single-year estimates will be released for communities of 65,000 or more in the year following the data collection. Data for communities of 20,000 or more will be available as 3-year period estimates starting in 2008. Data for communities smaller than 20,000 population will be available as 5-year period estimates starting in 2010. Single-year, 3-year, and 5-year period estimates will be updated in 2011 and every year thereafter. (Source: 2005 User's Guide – ACS Data User Training at http://www.census.gov/acs/www/Products/users_guide/acs_data_user_training.htm)

assume that if offered, the rural professionals would also. Demographic and household data for such non-urban residences likely would provide federal and state policy-makers a better description of the potential demand of broadband than is currently available.

43. *We invite specific comment on how we should identify particular areas as representative areas, to ensure that weighted extrapolation techniques will provide a statistically accurate picture of nationwide competitive conditions. Is there at this time a known set of such representative areas? If not, what is the Census Bureau or other source of data that can be used to select specific areas to represent urban, metropolitan, exurban, low-income, tribal, and rural areas, respectively? We ask commenters to identify that data source, or sources, with specificity and to explain why the source is appropriate to use. Should the extent of broadband deployment in an area be taken into account in selecting the representative areas? If so, how should it be taken into account? As we have noted, there is a detailed broadband deployment mapping initiative underway in Kentucky.*[73] *While there are no tribal lands in Kentucky, we ask for comment on whether it would be would be appropriate to select Kentucky areas to represent each of the other types of areas (i.e., urban, metropolitan, exurban, low-income, and rural).*

As mentioned in my reply to paragraph 40, above, the American Community Survey "representative areas" will, by the time of the 2010 Census and beyond become the *de facto* standard for sample areas of various sizes and for one, three and five year annual updates of data. By using population threshold-based samples coordinated with the Census Bureau, the Commission could ensure comparability of the demographic data from one analysis period to another and be able to develop sound longitudinal data sets.

46. *We also ask whether we should modify Form 477 to collect price information from all entities that report broadband connections. What price information should we collect? Should we collect the price information at the Zip Code, state, regional, or national level? What would be an appropriate way to define a region for this purpose? Should we require filers to estimate and report the cost of residential broadband services measured as price per bit?*

My response to the need to collect price information is a resounding "yes." The geographic basis should correspond to the basis for collection of service information (see comments above). Normalization of prices will be vitally necessary for meaningful analysis. Price per bit would be one approach. Price per bit-speed would be more meaningful and permit comparability between competitive marketers and between market segments within each provider's service areas.

56. *In the Notice, many of the proposals to increase our understanding of broadband availability would impose no reporting, recordkeeping or other compliance requirements*

on small entities. However, we invite comment on several other proposals that would impose further reporting and recordkeeping requirements on current Form 477 filers. Specifically, the Notice invites comment on whether current Form 477 filers should (1) report numbers of subscribers per 5-digit Zip Code, (2) report 9-digit Zip Codes where there is at least one subscriber or report numbers of subscribers per 9-digit Zip Code, (3) report geocoded information about subscriber locations, or (4) report information that delineates in detail the boundaries of their broadband-enabled service territories.[161] The Notice also seeks comment on whether the Commission should (1) refine the speed tier information the Commission currently collects by splitting an existing speed tier into two;[162] (2) require all broadband filers to report the number of residential customers served and also the number of homes "passed" by their broadband enabled infrastructure;[163] (3) collect demographic information about households from filers located in representative areas;[164] and (4) collect price information from filers in representative areas or from filers more generally.[165] In addition, we invite comment whether there are any alternatives not discussed in the Notice that would also serve the objectives of the Notice.[166] We invite comment on ways to mitigate the burden that might be imposed on small entities by proposals discussed in the Notice.[167] We also invite comment on alternatives to these proposals that would meet the objectives of the Notice but would impose lesser burdens on small entities.

The questions the Commission poses here go to the heart of the type of data required to reasonably assess the effectiveness of a number of public policy initiatives at both the federal and state levels. While I understand the Commission's concern about imposing additional record keeping and reporting requirements on broadband service providers, I question whether that concern should take precedence over gathering meaningful data. I would argue that good data and analysis will benefit regulators and industry alike making the effort a "win-win" for everyone involved. To that end, I encourage the Commission to, at a minimum, alter its data collection rule to require reporting of numbers of subscribers per 5-digit Zip Code as a percentage of residents within that Zip Code. As mentioned above 9-digit zip code information would be a great improvement over the current situation. However, to implement a minimal requirement of reporting only those 9-digit zip codes where there is at least one subscriber, would amount to one step forward and a half step back. A full-step improvement would be reporting numbers of subscribers per 9-digit Zip Code. I would view geocoded information about subscriber locations as the ideal, in particular if sufficient meta-data were attached to enable separation of residential from business customers. However, such a requirement likely would impose a tremendous additional burden on reporting entities. I do not believe that reports that delineate in detail the boundaries of broadband-enabled service territories solely using Zip Codes would be much of an improvement over the status quo. I refer you to my response to the questions posed above in paragraphs 40 and 43.

The Commission also asked whether the speed tier information should be refined by

splitting an existing speed tier into two, i.e., information transfer rates greater than 200 kbps and less than 1.0 mbps and transfer rates from 1.0 mbps to 2.5 mbps.

In any analysis that attempts to identify the extent to which true competition exists, one additional category of transfer speed, at the lower end of typical rates makes a great deal of sense. Especially in areas where cross-platform competition is the only type of competition, speed becomes an important quality of service factor.

[The Commission asked whether it should] *require all broadband filers to report the number of residential customers served and also the number of homes "passed" by their broadband enabled infrastructure.*

Having this information, would be ideal, but I question its applicability to the various wireless technologies. Detailed service territory maps might serve as surrogates for "numbers of homes passed" for wireless and satellite service providers, but the limitations of satellite and wireless technology in some locations make the usefulness of such service maps questionable (just ask anyone who has visited a cell phone store recently).

[The Commission asked whether it should] *collect demographic information about households from filers located in representative areas.*

As noted above, demographic and similar information about communities in which broadband services are available would be invaluable for a complete analysis of the degree to which state and federal policy goals are being implemented efficiently. However, I believe that if the Commission develops a means of coordinating its data collection with that of the Census Bureau, potential duplication of effort can be avoided.

[Finally, the Commission asked whether it should] *collect price information from filers in representative areas or from filers more generally.*

Obviously, and meaningful analysis of the extent to which real competition exists must include an analysis of price information. While I believe cost information must be collected, the Commission would have to develop a means of appropriate normalization of cost data in order to perform meaningful analysis. Thus, the Commission would have to determine how to treat bundled rates, stand alone rates and various speed tier pricing structures in order to compare product lines across providers and across technologies. A very high level of cooperation from all providers would be necessary to make price information useful for policy analysis purposes. However, as noted in response to paragraph 46 above, price per bit or price per bit-speed would be feasible options to develop price comparable data sets.